

WHAT IS CLAIMED IS:

1. A seed drill, comprising:
 - a frame;
 - a walking beam suspended from the frame and pivotable about a first
 - 5 pivot point;
 - a spring member connecting the walking beam to the frame and
 - movably biasing the walking beam downward relative to the frame; and
 - a first disk and a second disk rotatably mounted to opposite ends of the
 - walking beam and positioned adjacent one another, the first and the second disks being
 - 10 positioned on opposite sides of the first pivot point.
2. The seed drill of claim 1, further comprising an arm member having a
- first portion pivotably attached to the walking beam at the first pivot point and a second
- portion pivotably attached to the frame at a second pivot point, wherein pivotal
- movement of the walking beam about the first pivot point causes upward movement of
- 15 one of the first and second disks and downward movement of the other of the first and
- second disks relative to the first pivot point, and further wherein pivotal movement of
- the arm member about the second pivot point causes vertical displacement of the
- walking beam relative to the frame.
3. The seed drill of claim 1, further comprising a closing disk suspended
- 20 from the frame by a closing disk suspension, the closing disk being suspended from the
- frame independently of the walking beam.
4. The seed drill of claim 3, wherein the closing disk comprises a plurality
- of closing disks, all of which are rotatably mounted about a single rotational axis.

5. The seed drill of claim 1, wherein the first pivot point is offset from the center of the walking beam and is located closer to the second disk than the first disk, wherein the spring member transmits downward force to the walking beam at a point proximate the first pivot point, whereby a greater portion of the downward force is transmitted to the second disk than the first disk.

6. The seed drill of claim 1, wherein the walking beam, the first disk and the second disk comprise a walking beam assembly, the seed drill further comprising a plurality of walking beam assemblies spaced about an axis transverse to the direction of travel of the seed drill, wherein each of the walking beam assemblies is independently suspended from the frame.

7. The seed drill of claim 6, wherein the seed drill comprises a central axis along the direction of travel, the second disks on both sides of the central axis having concave surfaces facing the central axis.

8. The seed drill of claim 1, wherein the first disk comprises a cutting disk and the second disk comprises an opening disk.

9. A seed drill, comprising:
a frame;
a walking beam suspended from the frame and pivotable about a first pivot point;
a first disk and a second disk rotatably mounted to the walking beam and positioned on opposite sides of the first pivot point; and
a closing disk suspended from the frame by a closing disk suspension, the closing disk being suspended from the frame independently of the walking beam.

10. The seed drill of claim 9, wherein the closing disk comprises a plurality of closing disks, all of which are rotatably mounted about a single rotational axis.

11. The seed drill of claim 9, wherein the walking beam, first disk and second disk comprise a walking beam assembly, the seed drill further comprising a plurality of walking beam assemblies spaced about an axis transverse to the direction of travel of the seed drill, wherein each of the walking beam assemblies is independently suspended from the frame.

12. The seed drill of claim 11, wherein the closing disk comprises a plurality of closing disks, all of which are rotatably mounted about a single rotational axis.

13. The seed drill of claim 11, wherein the seed drill comprises a central axis aligned along the direction of travel, the second disks having concave surfaces facing the central axis.

14. The seed drill of claim 9, wherein the first pivot point is offset from the center of the walking beam and is located closer to the second disk than the first disk, wherein the spring member transmits downward force to the walking beam at a point proximate the first pivot point, whereby a greater portion of the downward force is transmitted to the second disk than the first disk.

15. The seed drill of claim 9, wherein the first disk comprises a cutting disk and the second disk comprises an opening disk

16. A seed drill, comprising:

a frame;

a walking beam having a first disk and a second disk rotatably mounted thereto, the walking beam defining a first pivot point between the first disk and the second disk;

an arm member having a first portion pivotably attached to the walking beam at the first pivot point and a second portion pivotably attached to the frame at a second pivot point;

5 wherein pivotal movement of the walking beam about the first pivot point causes upward movement of one of the first and second disks and downward movement of the other of the first and second disks relative to the first pivot point; and

further wherein pivotal movement of the arm member about the second pivot point causes vertical displacement of the walking beam relative to the frame.

17. The seed drill of claim 16 wherein the first disk and second disk are
10 mounted to opposite ends of the walking beam.

18. The seed drill of claim 17, wherein the first disk is disposed adjacent the second disk.

19. The seed drill of claim 16, wherein the outer edges of the first disk and second disk extend beyond the respective ends of the walking beam.

15 20. The seed drill of claim 16, further comprising a spring member connecting the frame and the walking beam and biasing the walking beam vertically downward relative to the frame.

21. The seed drill of claim 20, wherein the first pivot point is offset from the center of the walking beam and is located closer to the second disk than the first disk,
20 wherein the spring member transmits greater downward force to the second disk than the first disk.

22. The seed drill of claim 21, wherein the first pivot point is disposed within a radial periphery defined by the second disk.

23. The seed drill of claim 16, further comprising a closing disk suspended from the frame by a closing disk suspension, the closing disk being suspended from the frame independently of the walking beam.

24. The seed drill of claim 23, wherein the closing disk comprises a plurality
5 of closing disks, all of which are rotatably mounted about a single rotational axis.

25. The seed drill of claim 16, wherein the arm member is disposed at an acute angle relative to the walking beam, the acute angle varying with pivotal movement of the arm member about the second pivot point.

26. The seed drill of claim 16, wherein the first disk and the second disk
10 define a vertical axis midway therebetween, the first pivot point being positioned between the center of the second disk and the vertical axis and the second pivot point being positioned forward of the vertical axis.

27. The seed drill of claim 26, wherein the second pivot point is positioned forward of the first disk.

15 28. The seed drill of claim 16, further comprising a seed chute proximate the second disk and having a seed exit angled toward the first disk.

30. A method of forming a furrow in uneven terrain, comprising:

(a) providing a walking beam having a first disk and a second disk rotatably mounted to opposite ends thereof;

20 (b) aligning the walking beam along a direction of travel and moving the walking beam forwardly along the direction of travel over the uneven terrain while allowing the uneven terrain to pivot the walking beam about a pivot point located between the first and second disks; and

(c) applying downward force to the walking beam at the pivot point and thereby maintaining both the first disk and second disk in substantially constant contact with the uneven terrain, thereby forming the furrow.

31. The method of claim 30, further comprising cutting vegetation with the
5 first disk and forming the furrow with the second disk.

32. The method of claim 31, further comprising depositing seed in the furrow and then rolling a closing disk over the furrow to close it.

33. The method of claim 30, wherein the pivot point is offset from the middle of the walking beam and is closer to the second disk than the first disk, whereby
10 a greater portion of the downward force is applied to the second disk than the first disk.